Example: Time to get to School

- Find mean $\bar{x} = \frac{\Sigma x}{n}$
- Find variance $s^2 = \frac{\Sigma(x-\bar{x})^2}{n-1}$
- Find Standard deviation $s = \sqrt{\frac{\Sigma(x-\bar{x})^2}{n-1}}$

Data Set:

7, 7, 10, 10, 15, 15, 15, 15, 15, 20, 20, 20, 20, 20, 20, 25, 25, 25, 25, 25, 25, 25, 30, 30, 30, 40, 40, 40, 60, 60

$\bar{x} = 24.5$

. Procedure to get info from calculator:

Stat → Edit(1)

Stat → (Right arrow) → Calc → 1-Var Stats

$\bar{x} = 24.4\bar{6}$ → mean

$\Sigma x = 734$

$\Sigma x^2 = 22898$

$Sx = 13.05$ → Sample Standard deviation

$\sigma x = 12.83$

$n = 30$ → number of terms

$\min x = 7$

$Q_1 = 15$

$\text{med} = 22.5$

$Q_3 = 30$

$\max x = 60$

→ 5 Number Summary

- Example → Heights

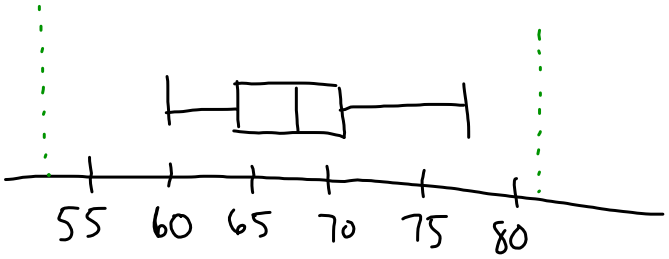
- Data: 69, 62, 70, 66, 70, 64,
64, 67, 61, 71, 70, 60, 67, 71, 65,
76, 74, 75, 63, 70, 70, 71, 63, 67,
62, 71, 71, 68, 62, 67, 77

Min = 60
Q_1 = 64
Med = 68
Q_3 = 71
max = 77

$IQR = Q_3 - Q_1$
$= 71 - 64$
$= 7$

upper fence $= Q_3 + (1.5)(IQR)$
$= 71 + (1.5)(7)$
$= 81.5$

lower fence $= Q_1 - (1.5)(IQR)$
$= 64 - (1.5)(7)$
$= 53.5$



Height Distribution in 1st Block